Oct. 8, 1929. W. D. HICKS 1,730,935

LATH

Filed Oct. 7, 1925

Fig. 1.

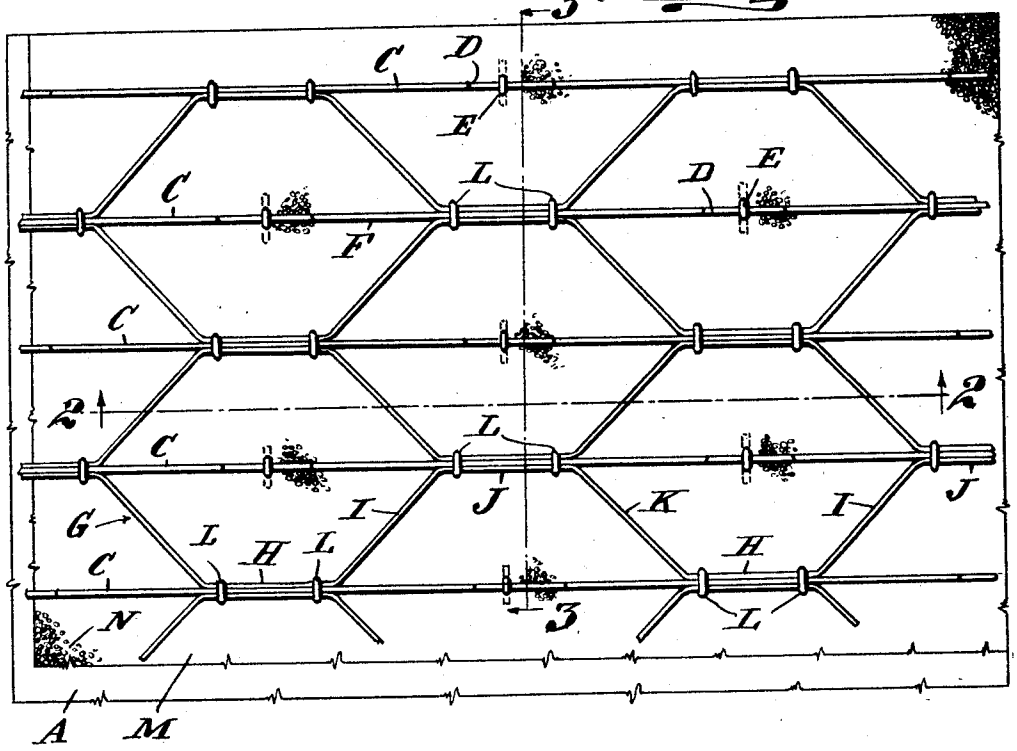


Fig. 2.

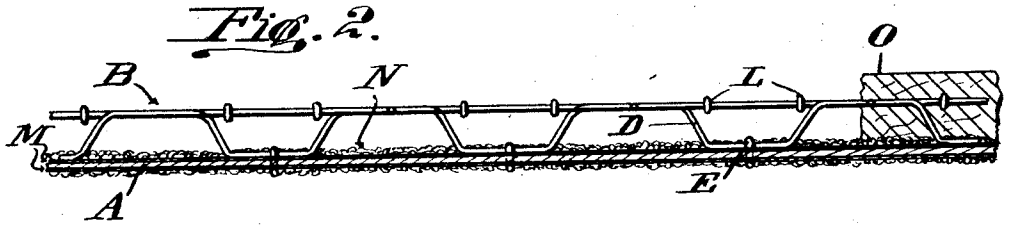


Fig. 3.

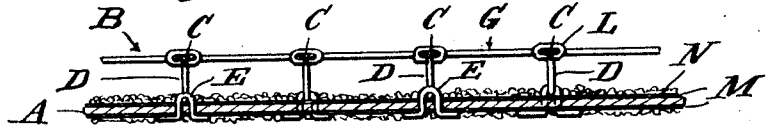
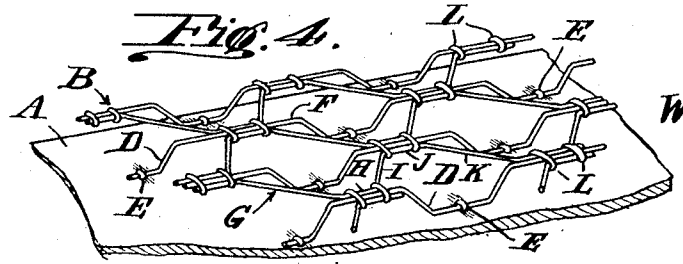


Fig. 4.



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UNITED STATES PATENT OFFICE

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LATH

Application filed October 7, 1925. Serial No. 61,035.

This invention relates to a lath panel for the reception of plaster, stucco and similar plastic wall-forming compounds, and more particularly pertains to that type of lath embodying wire strands permanently affixed to a backing sheet such as set forth in my copending application filed March 31, 1925, bearing Serial Number 19,614.

An object of the invention is to provide a lath of the above character in which the wire strands are so formed as to be spaced, in major part, from the surface of the backing sheet to which it is attached, whereby the strands will be disposed well within the plaster applied to the lath so as to effectively reinforce the plaster and securely retain it in place.

Another object is to provide a lath panel of the type specified which is so designed that the wire strands may be formed, arranged and connected together so as to provide a substantially net-like or reticulated structure during the course of assembling the wire on the backing sheet.

Another object is to provide a metal lath and backing sheet combined in a unitary structure adapted to be formed in panels which may be readily applied to supporting structures in one operation.

A further object is to provide a lath structure possessing the combined qualities of lightness and strength.

The invention resides generally in the provision of a lath panel comprising a backing sheet to which is permanently attached a wire structure embodying a series of spaced parallel strands extending transversely or longitudinally of the backing sheet having bends formed therein which seat on the backing sheet and are affixed thereto whereby lengths of the strands between the bends will be spaced from the surface of the facing sheet, and which also includes lengths of wire bent in general zig-zag form arranged between adjacent pairs of the other strands and affixed thereto. The invention further consists in coating the structure throughout with a fluid which hardens when dry, whereby the backing sheet is stiffened and rendered moisture-resistant and whereby adhesion of the backing sheet to the wire structure is effected, and further resides in applying an absorptive material to the coating to provide a bond for plaster throughout the area of the lath structure.

The invention further resides in the parts and in the combination, construction and arrangement of parts hereinafter set forth and illustrated by way of example in the accompanying drawings, in which:—

Fig. 1 is a plan view of the lath structure;

Fig. 2 is a view in section as seen on the line 2—2 of Fig. 1;

Fig. 3 is a view in section as seen on the line 3—3 of Fig. 1;

Fig. 4 is a detail in perspective showing the manner of forming the transverse and zig-zag strands, connecting them together and fastening the transverse strands to the backing sheet.

Referring to the drawings more specifically, A indicates a backing sheet which is preferably flexible and which may be formed of paper or other suitable fibrous material, and B indicates generally the wire structure which is affixed to the backing sheet to form the completed lath panel.

The wire structure comprises a series of parallel wire strands C which extend transversely of the backing sheet and each of which strands is formed with a series of spaced down turned bends D which seat on the backing sheet and are secured to the latter by means of staples E or other suitable fastenings whereby the lengths F of the wire strands C extending between the bends D are positioned in spaced relation to the backing sheet. Interposed between each pair of adjacent strands C is a strand G of general zig-zag formation; the strand G being formed with a straight portion H from which leads an obliquely extending length I leading to a straight portion J from which leads another oblique portion K to another straight portion H, and so on throughout the length of the strand G. The straight portions H and J abut against the adjacent parallel strands C with the oblique portions I and K extending in opposite directions. The strands G arranged on opposite sides of the strands C

are disposed in alternative relation, that is, with the straight portion H of one strand G on one side of the strand C, and the straight portion J of the other strand seating on strand C opposite the straight portion H; the strands G and C meeting intermediate the lengths of the strand portions F of the strand C between the spacing bends D. The strands G and C are securely connected together by metal clips L which embrace the portions H, J and F of the strands. Preferably a pair of clips L are arranged in spaced relation along the straight portions H and J.

It will now be observed that the zig-zag strands G are supported entirely by the strands C and are maintained in spaced relation to the backing sheet A and with the oblique portions I and K will, with the ties afforded by the strand C, form a truss-like structure.

After thus forming the combined wire structure and backing sheet, they are coated with a suitable water proofing material indicated at M, which material is of fluid character and is applied by submerging the structure therein, and is of such character as to harden when dry and possesses such cementitious or adhesive qualities as to cooperate with the staples E in effecting a bond between the wire structure and the backing sheet.

While this adhesive waterproof coating is in a fluid or semi-fluid state a coating of a comparatively coarse material of moisture-absorptive character is applied thereto as indicated at N; this material being applied to both sides of the backing sheet and serving with the coating M to stiffen the backing sheet, and at the same time render it impervious to penetration by moisture. This material N on the outer face of the backing sheet affords a bond for plaster and provides the necessary suction to hold fresh plaster in place, and permits the use of the lath overhead. By applying the material N to the back of the backing sheet, panels of the lath may be stacked without adjacent panels adhering together. The material N preferably consists of kieselguhr otherwise known as diatomaceous earth but may comprise any granular or fibrous material having the requisite quality of absorptiveness.

It is to be noted that in the lath thus formed the spaces bounded by the wires will be comparatively large in relation to the spaces occupied by the wire so that the structure will be light in weight, yet by reason of the truss-like arrangement, will be rendered exceedingly strong, and that when a coating of plaster is applied to the lath as indicated at O in Fig. 2, the wire strands will be well embedded in the plaster so as to afford a substantial reinforcement. A feature of the construction resides in joining the adjacent lengths of wire in spaced relation to the backing sheet so as to form relatively wide surfaces or areas of the wire structure at intervals throughout the lath panel, as particularly shown in Fig. 3, which affords increased bond for plaster at these points.

I claim:—

1. A lath structure comprising a flexible backing sheet, a series of spaced parallel strands extending transversely of said sheet having spacing bends formed therein seating on the backing sheet, said strands being arranged with the portions thereof extending between the bends spaced from the backing sheet, staples engaging the bends and backing sheet, zig-zag wire strands arranged between the adjacent parallel strands, the zig-zag strands on opposite sides of the parallel strands being disposed in alternative arrangement whereby oblique portions of the zig-zag strands will extend from opposite sides of the strands in opposite directions, and clips connecting the transverse strands and the zig-zag strands on opposite sides together whereby said zig-zag strands are supported wholly on said transverse strands, said connection points occurring between the points on the strands where the spacing bends occur.

2. A lath structure comprising a flexible backing sheet, a series of spaced parallel strands extending transversely of said sheet having spacing bends formed therein seating on the backing sheet, said strands being arranged with the portions thereof extending between the bends spaced from the backing sheet, staples engaging the bends and backing sheet, zig-zag strands on opposite sides of the parallel strands being disposed in alternative arrangement whereby oblique portions of the zig-zag strands will extend from opposite sides of the strands in opposite directions, clips connecting the transverse strands and the zig-zag strands on opposite sides together whereby said zig-zag strands are supported wholly on said transverse strands, and an adhesive waterproof coating on said backing sheet cooperating with the staples in affixing the bends of the transverse strands to the backing sheet, said connection points occurring between the points on the strands where the spacing bends occur.

3. A lath structure comprising a flexible backing sheet, a series of spaced parallel strands extending transversely of said sheet having spacing bends formed therein seating on the backing sheet, said strands being arranged with the portions thereof extending between the bends spaced from the backing sheet, staples engaging the bends and backing sheet, zig-zag strands on opposite sides of the parallel strands being disposed in alternative arrangement whereby oblique portions of the zig-zag strands will extend from opposite sides of the strands in opposite directions, clips connecting the transverse strands and the zig-zag strands on opposite sides together whereby said zig-zag strands are supported

wholly on said transverse strands, said connection points occurring between the points on the strands where the spacing bends occur, an adhesive waterproof coating on said backing sheet cooperating with the staples in affixing the bends of the transverse strands to the backing sheet, and an absorptive material adhered to said coating.

4. A lath structure comprising a flexible backing sheet, a series of parallel wire strands extending transversely of said backing sheet having spacing bends seating on the backing sheet, means effecting engagement between said bends and backing sheet, said strands arranged with the portions extending between the bends spaced from the backing sheet, and zig-zag strands arranged between adjacent pairs of parallel strands and supported thereon intermediate the spacing bends and thereby held in spaced relation to the backing sheet.

5. A lath structure comprising a flexible backing sheet, a series of parallel wire strands extending transversely of said backing sheet having spacing bends seating on the backing sheet, means effecting engagement between said bends and backing sheet, said strands arranged with the portions extending between the bends spaced from the backing sheets, zig-zag strands arranged between adjacent pairs of parallel strands and supported thereon intermediate the spacing bends and thereby held in spaced relation to the backing sheet, and an adhesive material coating to said strand and backing sheet.

6. A lath structure comprising a flexible backing sheet, a series of parallel wire strands extending transversely of said backing sheet having spacing bends seating on the backing sheet, means effecting engagement between said bends and backing sheet, said strands arranged with the portions extending between the bends spaced from the backing sheet, zig-zag strands arranged between adjacent pairs of parallel strands and supported thereon intermediate the spacing bends and thereby held in spaced relation to the backing sheet, an adhesive material coating said strands and backing sheets, and an absorptive material adhered to said coating.

7. In a lath structure, a series of spaced parallel strands formed with spacing bends, zig-zag wire strands arranged between the adjacent parallel strands, and clips connecting the parallel strands and the zig-zag strands intermediate the bends in said parallel strands.

In testimony whereof I have affixed my signature.

WILLIAM D. HICKS.